

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A transmission apparatus in a CDMA (Code Division Multiple Access) mobile communication system for, wherein transmission frames each have a plurality of time slots, and each of the time slots includes two data parts having the same length, a midamble intervening between the data parts, and a guard period for dividing the consecutive time slots, the transmission apparatus modulating the frames into a radio signal with a modulation signal and transmitting the modulated radio signal using a plurality of antennas, the transmission apparatus comprising:

a power amplifier for amplifying the radio signal in a transmission period;

a controller for generating a switching control signal in a non-transmission period~~guard period of time slots of a frame associated with the radio signal amplified by the power amplifier;~~
and

a switch for switching the amplified radio signal from the power amplifier between a first and a second antenna in response to the switching control signal, wherein the non-transmission period is a guard period in each time slot for dividing among the time slots of a frame associated with the radio signal, a guard period in each sub-frame for dividing among the sub-frames associated with the frame, or a guard period for dividing between uplink time slot and downlink time slot in the sub-frame.

2. (Currently Amended) The transmission apparatus as claimed in claim 1, wherein the controller generates the switching control signal in a guard period of the last time slot among the time slots of the frame ~~associated with the radio signal amplified by the power amplifier.~~

3. (Original) The transmission apparatus as claimed in claim 2, wherein the guard period has a length of 96 chips.

4. (Original) The transmission apparatus as claimed in claim 2, wherein the controller disables the power amplifier at a start point of the guard period and then outputs the switching control signal when an output level of the power amplifier is lowered to a predetermined level.

5. (Currently Amended) A transmission method in a CDMA (Code Division Multiple Access) mobile communication system for, wherein transmission frames each have a plurality of time slots, and each of the time slots includes two data parts having the same length, a midamble intervening between the data parts, and a guard period for dividing the consecutive time slots, the transmission method modulating the frames into a radio signal with a modulation signal and transmitting the modulated radio signal using a plurality of antennas, the transmission method comprising the steps of:

amplifying the radio signal in a transmission period;

generating a switching control signal in a non-transmission a guard period of time slots of a frame associated with the amplified radio signal; and

switching the amplified radio signal between a first and a second antenna in response to the switching control signal, wherein the non-transmission period is a guard period in each time slot for dividing among the time slots of a frame associated with the radio signal, a guard period in each sub-frame for dividing among the sub-frames associated with the frame and constituting the last time slot of the sub-frame, or a guard period for dividing between uplink time slot and downlink time slot in the sub-frame.

6. (Currently Amended) The transmission method as claimed in claim 5, wherein the switching control signal is generated in a guard period of the last time slot among the time slots of the frame ~~associated with the amplified radio signal.~~

7. (Original) The transmission method as claimed in claim 6, wherein the guard period has a length of 96 chips.

8. (Currently Amended) A transmission apparatus in a CDMA (Code Division Multiple Access) mobile communication system for, wherein transmission frames each have two sub-frames, and each of the sub-frames has (i) a plurality of time slots each including two data parts having the same length, a midamble intervening between the data parts, and a first guard period for dividing the consecutive time slots, (ii) a downlink pilot time slot, (iii) a second guard period

~~and (iv) an uplink pilot time slot, intervening between a first time slot and a second time slot among the time slots, the transmission apparatus modulating the sub-frames into a radio signal with a modulation signal and transmitting the modulated radio signal using a plurality of antennas, the transmission apparatus comprising:~~

a power amplifier for amplifying the radio signal in a transmission period;

a controller for generating a switching control signal in a non-transmission period ~~of a sub-frame associated with the radio signal amplified by the power amplifier;~~ and

a switch for switching the amplified radio signal ~~by~~from the power amplifier between a first and a second antenna in response to the switching control signal, wherein the non-transmission period is a first guard period in each sub-frame for dividing among the sub-frames associated with the frame, or a second guard period for dividing between uplink time slot and downlink time slot in the sub-frame.

9. (Cancelled)

10. (Currently Amended) The transmission apparatus as claimed in claim 9~~8~~, wherein the ~~switching control signal is generated in a first guard period of the last time slot among time slots of the sub-frame associated with the amplified radio signal.~~

11. (Original) The transmission apparatus as claimed in claim 10, wherein the first guard period has a length of 96 chips.

12. (Currently Amended) The transmission apparatus as claimed in claim 8, wherein the second guard~~non-transmission~~ period is a downlink non-transmission period of the sub-frame.

13. (Cancelled)

14. (Currently Amended) The transmission apparatus as claimed in claim ~~13~~12, wherein the downlink non-transmission period is 875 μ sec.

15. (Currently Amended) The transmission apparatus as claimed in claim 8, wherein the second guard~~non-transmission~~ period is an uplink non-transmission period of the sub-frame.

16. (Cancelled)

17. (Currently Amended) The transmission apparatus as claimed in claim ~~14~~15, wherein the uplink non-transmission period is 825 μ sec.

18. (Currently Amended) A transmission method in a CDMA (Code Division Multiple Access) mobile communication system for, ~~wherein transmission frames each have two sub-frames, and each of the sub-frames has (i) a plurality of time slots each including two data parts having the same length, a midamble intervening between the data parts, and a first guard period for dividing the consecutive time slots, (ii) a downlink pilot time slot, (iii) a second guard period and (iv) an uplink pilot time slot, intervening between a first time slot and a second time slot among the time slots, the transmission method modulating the sub-frames into a radio signal with a modulation signal and transmitting the modulated radio signal using a plurality of antennas, the transmission method comprising the steps of:~~

amplifying the radio signal in a transmission period;

generating a switching control signal in a non-transmission period ~~of a sub-frame associated with the amplified radio signal~~; and

switching the amplified radio signal between a first and a second antenna in response to the switching control signal, wherein the non-transmission period is a first guard period in each sub-frame for dividing among the sub-frames associated with the frame, or a second guard period for dividing between uplink time slot and downlink time slot in the sub-frame.

19. (Cancelled)

20. (Currently Amended) The transmission method as claimed in claim ~~19~~18, wherein the ~~switching control signal is generated in a first guard period~~ is a guard period of the last time slot among time slots of the sub-frame ~~associated with the amplified radio signal.~~

21. (Original) The transmission method as claimed in claim 20, wherein the first guard period has a length of 16 chips.

22. (Currently Amended) The transmission method as claimed in claim 18, wherein the second guard~~non-transmission~~ period is a downlink non-transmission period of the sub-frame.

23. (Cancelled)

24. (Currently Amended) The transmission method as claimed in claim ~~23~~22, wherein the downlink non-transmission period is 875μsec.

25. (Currently Amended) The transmission method as claimed in claim 18, wherein the second guard~~non-transmission~~ period is an uplink non-transmission period of the sub-frame.

26. (Cancelled)

27. (Currently Amended) The transmission method as claimed in claim ~~26~~25, wherein the uplink non-transmission period is 825μsec.

Claims 28-35 (Cancelled)

36. (New) The transmission apparatus as claimed in claim 1, wherein the guard period in each sub-frame for dividing among the sub-frames associated with the frame is a guard period of the last time slot among time slots of the sub-frame.

37. (New) The transmission apparatus as claimed in claim 5, wherein the guard period in each sub-frame for dividing among the sub-frames associated with the frame is a guard period of the last time slot among time slots of the sub-frame.